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ABSTRACT

A study investigated consumer satisfaction and employment status for successfully rehabilitated vocational rehabilitation (VR) clients from a central Kansas general caseload and identified clients in need of further services. Four independent variables were studied: severity of disability, disability groups, time elapsed since closure, and work fulfillment for clients who were employed. The dependent variables were scores from the Vocational Rehabilitation Process and Product subscales of the Vocational Rehabilitation Consumer Satisfaction Inventory. The sample consisted of 49 VR clients. Two composite null hypotheses were tested using a three-way analysis of variance and a one-way analysis of variance. Sixteen comparisons were made; eight were main effects and eight were interactions. Two main effects were statistically significant at the .05 level: time elapsed since closure for the dependent variable VR process satisfaction and work fulfillment for the dependent variable VR product satisfaction. Three of the four statistically significant comparisons were for interactions: (1) severity of disability, disability group, and time elapsed since closure for the dependent variable VR Process Satisfaction; (2) severity of disability and disability group for product satisfaction; and (3) severity of disability and time elapsed since closure for product satisfaction. (Nineteen references are listed. Appendixes include instruments and additional demographic information.) (YLB)

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ED 375 323

A FOLLOW-UP STUDY IN VOCATIONAL REHABILITATION

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A Thesis Presented to the Graduate Faculty
of the Fort Hays State University in
Partial Fulfillment of the Requirements for
the Degree of Master of Science

by

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Graduate Committee Approval

The Graduate Committee of Douglas M. Main hereby approves his thesis as meeting partial fulfillment of the requirements for the Degree of Master of Science.

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Abstract

The purpose of the researcher was to investigate consumer satisfaction and employment status for successfully rehabilitated VR clients from a central Kansas general caseload, and to identify clients in need of further services. The independent variables investigated were: severity of disability, disability groups, time elapse since closure, and work fulfillment for clients who were employed. The dependent variables were scores from the VR Process and Product sub-scales of the VR Consumer Satisfaction Inventory. The sample consisted of 49 VR clients. Two composite null hypotheses were tested employing a three-way analysis of variance (general linear model) and a one-way analysis of variance. A total of 16 comparisons were made. Eight of the 16 were main effects and 8 were interactions. Two of the main effects were statistically significant at the .05 level. The following main effects were statistically significant:

1. time elapse since closure for the dependent variable VR Process Satisfaction, and

2. work fulfillment for the dependent variable VR Product Satisfaction.

Three of the four statistically significant comparisons were for interactions. The following interactions were statistically significant:

1. severity of disability, disability group, and time elapse

since closure for the dependent variable VR Process Satisfaction.

2. severity of disability and disability group for the dependent variable VR Product Satisfaction,

3. severity of disability and time elapse since closure for the dependent variable VR Product Satisfaction.

The results of the present study appeared to support the following generalizations:

1. clients with high work fulfillment have greater VR Product Satisfaction than clients with low work fulfillment, and

2. significant interactions for,

a. severity of disability, disability group, and time elapse since closure for the dependent variable VR Process Satisfaction,

b. severity of disability and disability group for the dependent variable VR Product Satisfaction, and

c. severity of disability and time elapse since closure for the dependent variable VR Product Satisfaction.

Introduction

Background

The Rehabilitation Act Amendments of 1992 focused national attention on the issues of consumer satisfaction and employment outcomes in Vocational Rehabilitation (VR). State VR agencies will soon be required to conduct annual program evaluations, including consumer satisfaction surveys (Office of the Federal Register, 1993). The 1992 Amendments also called for the creation of a National Commission on Rehabilitation Services to study the effectiveness of the VR program. Dole (1993), in a news release from the United States Senate Republican Leader, proposed the following direction for the Commission:

> When we passed the Americans with Disabilities Act in 1990 we were determined to open a new window of employment opportunity for millions with disabilities. But we also knew that for many that window would remain closed because they lacked job skills and education. That's where VR comes in - or should come in - by providing the disabled with help to become gainfully employed, and thus join the economic mainstream and achieve some kind of financial security and independence...The Commission should ask provocative questions: are VR customers satisfied?...how can we prevent job loss?...America's biggest promise - a job - is too often an empty promise to the disabled. Only one-third are working, 30 percent are in poverty - nearly 3 times the general population. (p. 1-2)

Consumer advocacy groups have been at the forefront in the call

for change. Representing a national consortium of consumer advocates before congress, Paluso, as cited in Hearings (1991, p. 44), wrote:

> The paradigm proposed by the Directions platform places the consumer truly at the center of service delivery. It calls for the act to both embody personal empowerment and acknowledge the importance of community action in assuring accessibility to generic services.

Empowerment in this regard and client-centered choice have become a focus of current research.

Empowerment

To define the agenda for consumer satisfaction, Czerlinsky and Chandler (1993) developed an empirical description of the touchstone concept of empowerment. Three national surveys of 300 rehabilitation professionals and consumer advocates were conducted. The first survey identified elements of empowerment organized by Q-sort procedures into 6 categories. These elements were rated in the second survey. The third survey identified methods to show the presence or absence of the elements. The researchers identified the primary consumer issues as client involvement in decisions and in the rehabilitation process. Several counselor or service provider characteristics were identified as necessary. These included helpers being aware of their limitations, accepting consumers as individuals and as adults, communicating at an appropriate level for each consumer, having skill in empathic

listening, and being honest and genuine.

Client Involvement

Farley, Bolton, and Parkerson (1992) investigated the impact of client involvement strategies on vocational development. Subjects were 75 vocational rehabilitation clients admitted to a state rehabilitation facility for vocational evaluations. Five categories of primary disabilities were represented in experimental and control groups. The experimental group received a group vocational exploration program called the Occupational Choice Strategy and an individualized program entitled Know Thyself. Five dependent measures were used. Four were investigated in a pretest-postest design, and the fifth in a postest consumer satisfaction survey. One-tailed tests of significance, obtained using independent samples t-tests, demonstrated a significantly greater improvement in scores for the experimental group on the Vocational Self-Awareness Scale (t=2.05, p=.02), and the My Vocational Situation questionnaire (t=1.88, p=.03). Results were tested at the .05 level of significance. Some improvement was noted on the Career Decision Scale (t=1.49, p=.07). No statistically significant difference between the groups was found on the Employability Maturity Interview or the postest Program Satisfaction Survey.

In a general follow-up study, Roessler and Bolton (1985) interviewed a stratified sample of 57 vocational rehabilitation clients whose cases were closed. Clients with more severe vocational impediments were disproportionately represented. A one

hour standardized interview was used with clients and the Minnesota Satisfactoriness Scales with employers. The results of the study indicated that 49% of the former clients were competitively employed, 10% were in sheltered workshops, and 41% were unemployed. Seventy-two percent held secondary labor market positions with an average salary of $125 per week. Sixty-two percent held jobs consistent with their training, rehabilitation services were viewed positively by 54%, and 64% felt their jobs were desirable. Correlational analyses indicated that those who enjoyed their work were more likely to also enjoy hobbies (r=.30, p < .03) and socializing (r=.33, p < .02). Thirty-eight employers rated client work performance. A majority of employers rated client work performance as "average or better" but "below average" in potential for advancement. The researchers recommended that counselors determine their role in placement with each client individually. Also, increased emphasis on fringe benefits, post employment services, and career development was urged.

Congruence

There is a similarity between the concepts of empowerment and congruence. The relationship between congruence and job satisfaction has been well researched, but not in relation to people with disabilities.

Jagger, Neukrug, and McAuliffe (1992) studied the relationship between the congruence of fit between person and career factors, and job satisfaction in successful vocational rehabilitation cases.

The Minnesota Satisfaction Questionnaire-Short Form was mailed to 97 clients and 72 (74%) responded. Persons with a diagnosis of mental retardation were not included in the survey. Each individual's Holland Code was determined from pre-existing interest inventories in the case files, and the Compatibility Index was used to assess congruence between this code and that of each person's current occupation. A significant positive correlation was found between job satisfaction and congruence (r=.26, p<.05) for individuals with disabilities.

Follow-up Studies

Bolton (1981) summarized follow-up studies in rehabilitation up to the year 1980 as follows.

> More than 100 follow-up studies have been conducted in rehabilitation settings during the last 25 years. However, most of these investigations were carried out as part of larger research projects and were often included as one section in a comprehensive project report. Many of the reports received only limited distribution, making the follow-up studies contained therein difficult to locate. Furthermore, the follow-up intervals in these studies were typically short, that is, six months to two years. (p. 59)

Between 1975 and 1981, most state agencies conducted at least one follow-up survey in compliance with the Rehabilitation Act of 1973 (Bolton, 1981). Response rates were low and the data analysis was unsystematic. Bolton concluded from these studies, however, that

approximately two-thirds of general caseload rehabilitants, and one-half of comprehensive center rehabilitants were employed at follow-up. For the latter, employment rates varied considerably depending on the severity of disabilities involved and the difficulty of the caseload. The studies generally found no difference in employment rates between recently rehabilitated clients and rehabilitants with cases closed two to four years.

In Kansas, the 1981 consumer survey was the last one conducted before the program evaluation requirement of the Rehabilitation Act of 1973 was relaxed (Staff, 1982). The unpublished Kansas survey was part of a larger outcome oriented instrument, and was mailed to 948 individuals across the state. Of 371 respondents, 194 were closed rehabilitated, 104 were closed not rehabilitated after services were initiated, and 73 were closed not rehabilitated before services could be started. No reliability and validity measures were reported for the instrument. The results indicated that clients most often wanted financial help as opposed to other services. Competitive employment rates were 64.4% for rehabilitated clients and 44.7% for the combined groups. Those not working most often cited health problems as the primary barrier to working. Seventy-six percent of the rehabilitated clients liked their jobs and 67% would recommend VR to others. Training was the service cited as the most helpful, with becoming independent next. Fourteen percent of the total sample voiced a negative concern, most often associated with training, bureaucracy, or placement. Nineteen

survey items focused on client satisfaction and questions answered "does not apply" were discarded. The highest satisfaction reported was 91% with new ideas and feelings about people, and the lowest was 70% with assistance in working out problems after placement.

Instruments

Harrison and Others (1981) compiled an overview of 40 of the most significant client assessment instruments developed in state VR agency research in the period following the passing of the Rehabilitation Act of 1973. Research was encouraged on rehabilitation outcome areas other than employment status and client satisfaction, which were mandated by the Rehabilitation Act. Instruments were grouped into employability, independent living skills, client perceptions, client satisfaction, and miscellaneous categories. Of the four instruments in the overview related to satisfaction in general, only the Minnesota Satisfaction Questionnaire, focused specifically on job satisfaction, included both reliability and validity measurements. Three instruments were specifically focused on consumer satisfaction, employment outcomes, or both. A Hoyt reliability coefficient of .83 was obtained on the 14 item Scale of Client Satisfaction, but no validity measurement was included, and the instrument focused exclusively on client satisfaction with the VR counselor. The number of items ranged from 14 to 100 in the 5 satisfaction instruments.

Adaptability

Levitan and Gallo (1991) maintained that stable and long term

employment outcomes were becoming more difficult to attain for the general population. The high cost of rising credentialism in America, coupled with the growing number of high school graduates who are functionally illiterate, is "a tragic waste of human resources" (p. 54). Basic skill deficiencies combined with the constant flux of the job market make the displacement of workers inevitable.

As evidenced in a 1993 report by the United States General Accounting Office (GAO), displacement and vocational adaptability are a compounded problem for people with disabilities. The GAO evaluated the long term employment gains of over 40,000 successfully rehabilitated VR clients from the year 1980. A computer-matched file called the data link, which connected the Rehabilitation Services Administration (RSA) with the Social Security Administration, allowed researchers to evaluate longitudinal employment information for VR clients. Results, given for physical, emotional, and mental (mental retardation) disability groups, indicated that:

> rehabilitants' gains in employment and earnings from time of referral to their case-closure year of 1980 faded after about 2 years. The fraction working shrank steadily. By 1988, the last year examined, 61 to 66 percent of rehabilitants' (depending on type of disability) had some earnings; however, this was either no better than or below the pre-program level (depending on the type of disability), and only a third had worked continuously

since 1980. (p. 3)

Based upon the results of regression analysis for physical, emotional, and developmental disability groups, the GAO found that "rehabilitants' did do better than dropouts on all measures of work and earnings ($p.<.001$) even after statistical analyses controlled for some pre-program differences between the groups" (1993, p. 3). Rehabilitants' were 12 to 19 percent more likely to be employed at a $1,000 to $2,000 higher wage than VR dropouts.

The GAO (1993) utilized RSA Case Service Reports and other government data to address several additional issues. Results were reported using percentages and dollar amounts. The eligible VR population was estimated at 14 to 18 million people with 5 to 7 percent of these being served in any one year. Those accepted for services were more likely to be classified as having a severe disability. VR services received were described, with minority clients less than proportionately represented, and an average of $1,573 spent per client.

Sitlington, Frank, and Carson (1992) did a one year statewide follow-up study of 1985 and 1986 high school special education graduates in Iowa. A structured Interview was utilized with 737 students diagnosed as learning disabled (LD), 59 as behaviorally disordered (BD), and 142 as mentally disabled (MD). The criterion used for diagnosing MD was an IQ of less than 85. The purpose of the study was to compare adult adjustment and employment across disability groups based on gender. Results indicated employment

rates of 77%, 58%, and 62% for LD, BD, and MD students, respectively, with higher rates for males. Statistical comparisons were made using t-tests, which indicated that LD and MD males had higher wages ($p<.001$). Chi-Square tests comparing hours worked and gender indicated that LD and MD males worked more hours than females ($p<.005$). Of those who held paid jobs while in high school, 77% were competitively employed compared to 50% of those without a paid high school work experience ($X^2=13.30$, $p<.001$). Successful graduates were characterized as employed, living independently, paying a part of living expenses, and involved in at least three leisure activities. Less than 10% in any category were successful graduates. The authors concluded with a statement of disagreement with the notion that only the more severely disabled should receive transition planning.

The Most Severe

Looking at a more severely disabled population, Ellerd and Moore (1992) did a study of 24 people with Traumatic Brain Injury who had received individual placements through supported employment. The purpose of the study was to investigate job retention, wages, hours worked, and reasons why jobs were lost. All of the participants were unemployed and recipients of social security benefits. Each received supported employment services and then follow up results were compared at 12 and 30 months. The number employed dropped from 17 (71%) at 12 months, to 9 (38%) at 30 months. Mean hours worked dropped from 33 to 30 hours per

week, but wages increased from $5.19 to $7.19 per hour. Mean days worked per year also increased considerably, from 86.9 to 226.0. Five of the 15 separations were due to substance abuse. Social security, medical, psychotic, and behavioral issues accounted for two job losses each, one left work to complete educational studies, and one was laid off. Discussion on improving these outcomes included alcohol intervention and more frequent visits to the job site.

Weller (1991) investigated the satisfaction of 312 developmentally disabled individuals with a variety of services in Florida. All age groups were represented. Data were collected through personal interviews based on a questionnaire developed by the National Association of Developmental Disabilities. Zero order correlation coefficients indicated four out of a number of factors researched that were statistically significant at the .01 level The statistically significant variables were: age, living arrangement, number of services received, and whether or not the individual had both physical and emotional disabilities. The data were also analysed using Multiple Classification Analysis, an analysis of variance procedure. The statistically significant predictors of satisfaction using this procedure were: family setting, age and number of services received. Persons living in a family setting had higher expectations and were more unsatisfied, adolescents were the least satisfied age group, and satisfaction went down with increase in the number of services received. The lowest frequency

of services received was vocational.

Olney and Salomone (1992) reviewed literature on a variety of empowerment strategies for individuals with severe disabilities who received supported employment services. They concluded that persons classified as most severe own their work and stay on the job longer if they were involved in the rehabilitation process. The writers urged helpers to resist the tendency to manage decisions more closely for this population, and to look for clients to express preferences through their behavior.

Summary

Research in VR has been primarily a product of federal program evaluation requirements. After the passing of the Rehabilitation Act of 1973 until about 1981, research on client satisfaction and employment outcomes was specifically required of state VR agencies. These studies were largely unsystematic, unpublished, and entailed a more short-term employment follow-up. Resulting from the Rehabilitation Act Amendments (1992), new federal regulations were expected to be released in the near future which reinstitute program evaluation requirements similar to the 1973 mandate. However, the emphasis was expected to be on more long-term employment outcomes and on consumer satisfaction as a more widely accepted measure of the quality of VR services.

This was due in large part to the influence of the consumer advocacy movement and research since 1981 supporting client involvement and choice as a means to greater program effectiveness.

The resulting philosophical shift away from the medical model toward a more client centered approach has impacted VR in several ways. The main effect has been an increased emphasis on serving individuals with more severe disabilities, including them in the community, in competitive employment, and in the educational process. Several new programs have been developed in the last decade to serve individuals with the most severe disabilities. The most notable programs, for example, are supported employment initiatives with ongoing services, and transition programs for special education students.

Before the mandate to conduct follow-up research was rescinded in 1981, Bolton wrote:

> The ultimate objective of the VR program is the long-term adjustment of disabled persons; this objective can only be evaluated fully by locating ex-clients and assessing their life circumstances several years after services have been completed. For those former clients who have experienced adjustment difficulties, it may be possible to provide additional services in conjunction with the follow-up process. All rehabilitation practitioners and administrators should be interested in the results of VR follow-up studies because the data such studies provide are essential to understanding successes and failures in the service delivery system. (p. 58)

In order to simultaneously serve a more severely disabled population and improve long-term employment outcomes, a systematic follow-

up on the satisfaction and needs of rehabilitated VR clients is needed.

Statement of the Problem

The purpose of the researcher was to investigate consumer satisfaction and employment status for successfully rehabilitated VR clients from a central Kansas general caseload, and to identify clients in need of further services.

Rationale and Importance of the Research

First, the proposed study would appear to be appropriate for counseling majors in human services, particularly those who plan to work in VR counseling. Several core concepts of the degree curriculum were involved in the research. Second, the study directly applied the current federal emphasis on consumer satisfaction and employment outcomes to the author's caseload. By concentrating on a single caseload it was possible to locate clients in need of further services and recycle them through the VR process. This method addressed the fundamental issue of career adaptability in VR. Third, the researcher attempted to address the more diffuse concepts of consumer satisfaction and empowerment in terms of more widely understood concepts such as self-awareness, adaptability, work fulfillment, independence, client participation and congruence. Last, the simple method of instrumentation used did not require the exclusion of any disability group. This allowed for a more composite overview of the caseload.

The research proposed in this study would contribute to general

knowledge pertinent to VR counseling. It could be of use to VR counselors, program administrators, and other rehabilitation professionals in a variety of settings. Results from the present study provided information pertaining to the following questions:

1. Is there an association between severity of disability and consumer satisfaction?

2. Is there an association between disability groups and consumer satisfaction?

3. Is there an association between the time elapse since case closure and consumer satisfaction?

4. Is there an association between client need for further services and consumer satisfaction?

5. Is there an association between work fulfillment for those who are employed and consumer satisfaction?

Composite Null Hypotheses

Each null hypothesis was tested at the .05 level of significance.

1. The differences among the mean VR Consumer Satisfaction scores for VR clients according to severity of disability, disability group, and time elapse since closure would not be statistically significant.

2. The differences among the mean VR Consumer Satisfaction scores for VR clients according to severity of disability, disability group, and client need for further services would not be statistically significant.

3. The differences among the mean VR Consumer Satisfaction

scores for VR clients according to severity of disability, time elapse since closure, and client need for further services would not be statistically significant.

4. The differences among the mean VR Consumer Satisfaction scores for VR clients according to disability group, time elapse since closure, and client need for further services would not be statistically significant.

5. The difference between mean VR Consumer Satisfaction scores for employed VR clients according to work fulfillment would not be statistically significant.

Independent Variables and Rationale

The following independent variables were investigated: severity of disability, disability groups, time elapse since case closure, client need for further services, and work fulfillment for clients who were employed. Each of the variables was selected for the following reasons: the lack of available research pertaining to the variables, the results reported were inconclusive, and the studies were outdated.

Independent Variables

The independent variables were self reported. The following independent variables were employed:

1. severity of disability - 2 levels:

level one - severe, and

level two - not severe.

2. disability groups - 3 levels:

level one - orthopedic disabilities,

level two - mental disabilities, and

level three - other disability groups.

3. time elapse since closure - 2 levels determined post hoc:

level one - closed in the fiscal years 1993 and 1994,

level two - closed in the fiscal years 1991 and 1992.

4. client need of further services - 3 levels:

level one - employed,

level two - not employed but wanting further services, and

level three - not employed and not wanting further services.

5. work fulfillment for employed clients - 2 levels determined post hoc:

level one - at the median or above, (larger n because there were six scores at the median),

level two - below the median.

Dependent Variables

Scores from two sub-scales of four items each in the VR Consumer Satisfaction Inventory were employed as dependent variables:

1. VR Process Satisfaction, (possible scores 4-16) and
2. VR Product Satisfaction (possible scores 4-16).

Limitations

The following factors might have affected the outcome of the present study:

1. the sample was not randomly selected,

2. the sample consisted of clients of one VR caseload,

3. self-reporting instruments were used for collecting data, and

4. sample size.

Delimitations

The following were not implemented:

1. pilot study of the instruments,
2. reliability studies of the instruments, and
3. validity studies of the instruments.

Methodology

Setting

The setting for this study involved a population base of about 41,000 people from three counties in Central Kansas (Staff, 1992). All three counties had a population decrease from 1980 to 1990, which varied from 6.26% in the largest of the counties to 14.92% in the smallest. This population decrease was precipitated largely by the drop in international oil prices in 1986. With oil and agriculture as the predominant industries of the area, the unemployment rate in these counties was among the highest in the nation at that time. Currently the local economy appears to be more stable, but without the signs of economic growth evidenced elsewhere in the state.

Subjects

A convenience sampling procedure was used. The sample consisted of 62 rehabilitants whose cases were closed in the period from July 1, 1990 to December 31, 1993. Each of these individuals

had been served by at least one of four different VR counselors. The sample consisted of 40 men and 22 women, ages 19 to 62. Thirty-eight were severely disabled according to RSA guidelines, and 24 were not. The disability groups represented, based on primary disabilities only, included 23-orthopedic, 12-mental retardation, 5-borderline intellectual functioning, 5-mental illness, 3-diabetes, and 3-deaf or hard of hearing. The remaining 17 conditions represented occurred only once as primary disabilities. Three independent living cases for individuals with disabilities too severe for work were included. These three were served for the purpose of maximizing their independence, but were not employed when their cases were closed. Thus, 59 clients were employed at the time of closure.

Instrumentation

Three instruments were used in collecting information. The instruments were a Demographic Questionnaire (Appendix B), a VR Consumer Satisfaction Inventory (Appendix C), and a VR Work Fulfillment Inventory (Appendix D) developed by the researcher. Each instrument was administered verbally. Individuals with more severe mental disabilities were given the instruments in person when possible, and the remaining clients were surveyed by phone.

The demographic questionnaire contained 12 items, addressing: age, gender, changes in health, employment status, work history since closure, advancements, wage, benefits, public assistance benefits, Social Security benefits, family status, and living

arrangements.

The VR Consumer Satisfaction Inventory consisted of 10 items contained in two 5 item subscales pertaining to process and product client satisfaction with VR. A 4 point Likert-Type scale was used with scores ranging from 1 - very unsatisfied, to 4 - very satisfied. The total scores possible ranged from 10 to 40. Process items pertained to satisfaction with the program, counselor, services received, client involvement, and need fulfillment. Product items pertained to career adaptability, job readiness, career maturity, independent living skills, and quality of life.

The VR Work Fulfillment Inventory also consisted of 10 items on a 4 point Likert-Type scale with total points ranging from 10 to 40. This instrument was administered only to clients who were employed. Items pertained to satisfaction with work, salary, benefits, competence, enjoyment, advancement potential, long-term stability, perceived congruence, supervision, and coworker relations.

Design

A postest factorial design was employed. The independent variables investigated were: severity of disability, disability groups, time elapse since closure, need of further services, and work fulfillment for employed clients. The dependent variables were scores from the VR Process and Product subscales in the VR Consumer Satisfaction Inventory. The sample consisted of 49 VR clients. Five composite null hypotheses were tested employing a three-way analysis of variance (general linear model) and a one-way

analysis of variance as follows:

composite null hypothesis number one, a 2 x 3 x 2 factorial design,

composite null hypothesis number two, a 2 x 3 x 3 factorial design,

composite null hypothesis number three, a 2 x 2 x 3 factorial design,

composite null hypothesis number four, a 3 x 2 x 3 factorial design, and

composite null hypothesis number five, a single factor analysis of variance design.

MacMillan and Schumacher (1989) cited 10 threats to internal validity. The researcher dealt with these threats as follows:

1. history - did not pertain because the study was status survey;

2. selection - only those who were willing to participate were included in the study;

3. statistical regression - did not pertain because the study was status survey;

4. testing - did not pertain because the study was status survey;

5. instrumentation - did not pertain because the study was status survey;

6. mortality - did not pertain because the study was status survey;

7. maturation - did not pertain because the study was status survey;

8. diffusion of treatment - did not pertain because no treatment was administered;

9. experimenter bias - no treatment was administered, and a single interviewer used a standard interview format; and

10. statistical conclusion - two mathematical assumptions (random sampling and equal number in cells) were violated. The general linear model was used to correct for lack of equal number in cells, and the researcher did not project interpretations beyond the procedures used.

McMillan and Schumacher (1989) cited two threats to external validity. The researcher dealt with these as follows:

1. population - the sample was not random; therefore, results should be generalized only to similar groups; and

2. ecological - no treatment was administered, and a single interviewer used a standard interview format.

Data Collection Procedures

Permission to survey clients from the researcher's VR caseload was obtained (Appendix A). The researcher then obtained a list of rehabilitants from the Kansas Rehabilitation Services Central Office, and closed case files were ordered. Phone contacts were used to either conduct a phone interview, or to set an appointment for a personal interview. All clients were informed initially that their participation was voluntary and not an official part of the VR

process. Personal interviews were arranged with ongoing service providers for the most severely mentally disabled clients.

Research Procedures

The following steps were implemented:

1. a computer search using the ERIC, PSYCLIT, SOCIOFILE, Psychological Abstracts, and Business Index data bases was made at the Forsyth Library, Fort Hays State University;
2. the literature was obtained by interlibrary loan at the researcher's local library and subsequently reviewed and developed;
3. permission to conduct the research was obtained;
4. a research proposal was written;
5. three instruments were developed;
6. data were collected;
7. data were analysed;
8. the document was written;
9. the thesis was defended; and
10. final editing of the document.

Data Analysis

The following were compiled:

1. appropriate descriptive statistics,
2. three-way analysis of variance (general linear model),
3. one-way analysis of variance,
4. Bonferonni (Dunn) t test for means, and
5. Duncan's Multiple Range test for means.

Results

The purpose of the researcher was to investigate consumer satisfaction and employment status for successfully rehabilitated VR clients from a central Kansas general caseload, and to identify clients in need of further services. The independent variables investigated were: severity of disability, disability groups, time elapse since closure, and work fulfillment for clients who were employed. The dependent variables were scores from the VR Process and Product subscales in the VR Consumer Satisfaction Inventory. The sample consisted of 49 VR clients. Five composite null hypotheses were tested employing a three-way analysis of variance (general linear model) and a one-way analysis of variance as follows:

composite null hypothesis number one, a 2 x 3 x 2 factorial design,

composite null hypothesis number two, a 2 x 3 x 3 factorial design,

composite null hypothesis number three, a 2 x 2 x 3 factorial design,

composite null hypothesis number four, a 3 x 2 x 3 factorial design, and

composite null hypothesis number five, a single factor analysis of variance design. The results section was organized according to composite null hypotheses for ease of reference. Information pertaining to each composite null hypothesis was presented in a

common format for ease of comparison.

It was hypothesized in composite null hypothesis number one that the differences among the mean VR Consumer Satisfaction scores for VR clients according to severity of disability, disability group, and time elapse since closure would not be statistically significant. Information pertaining to composite null hypothesis number one was presented in Table 1. The following information was cited in Table 1: variables, group sizes, means, standard deviations, F values, and p levels.

Table 1: A Comparison of Mean VR Consumer Satisfaction Inventory Scores for VR Clients According to Severity of Disability, Disability Group, and Time Elapse since Closure, Employing a Three-Way Analysis of Variance

Variable	n	M*	s	F value	p level
		VR Process Satisfaction			
Severity of Disability (A)					
severe	29	17.1	2.56	0.05	.8283
not severe	20	17.3	2.96		
Disability Groups (B)					
orthopedic	19	17.4	3.45		
mental	16	17.3	1.70	2.21	.1235
other	14	16.8	2.64		
Time Elapse Since Closure (C)					
closed in fiscal years 1994 and 1993	34	17.7[a]	2.40	6.57	.0146
closed in fiscal years 1992 and 1991	15	15.9[b]	2.97		
		Interactions			
AxB				1.90	.1644
AxC				0.91	.3453
BxC				2.19	.1262
AxBxC				5.29	.0096

(continued)

Table 1 (continued)

Variable	n	M*	s	F value	p level
		VR Product Satisfaction			
Severity of Disability (A)					
severe	29	14.6	1.86	2.61	.1149
not severe	20	16.3	2.55		
Disability Groups (B)					
orthopedic	19	15.6	2.29		
mental	16	14.9	2.09	1.75	.1883
other	14	15.2	2.61		
Time Elapse Since Closure (c)					
closed in fiscal years 1994 and 1993	34	15.6	2.27		
closed in fiscal years 1992 and 1991	15	14.5	2.23	0.12	.7336
		Interactions			
		AxB		3.96	.0277
		AxC		6.18	.0176
		BxC		2.86	.0700
		AxBxC		1.26	.2944

* The larger the value the greater the satisfaction.

ab Difference statistically significant at the .05 level according to the Bonferonni (Dunn) t test for means.

Four of the 14 p values were statistically significant at the .05 level; therefore, the null hypotheses for these comparisons were rejected. One of the four significant comparisons was for the main effect time elapse since closure for the dependent variable VR Process Satisfaction. The results cited in Table 1 indicated those whose cases were closed in fiscal years 1993 and 1994 rated VR process satisfaction statistically higher than those whose cases were closed in fiscal years 1991 and 1992.

Three of the four statistically significant comparisons were for interactions. The following interactions were statistically significant:

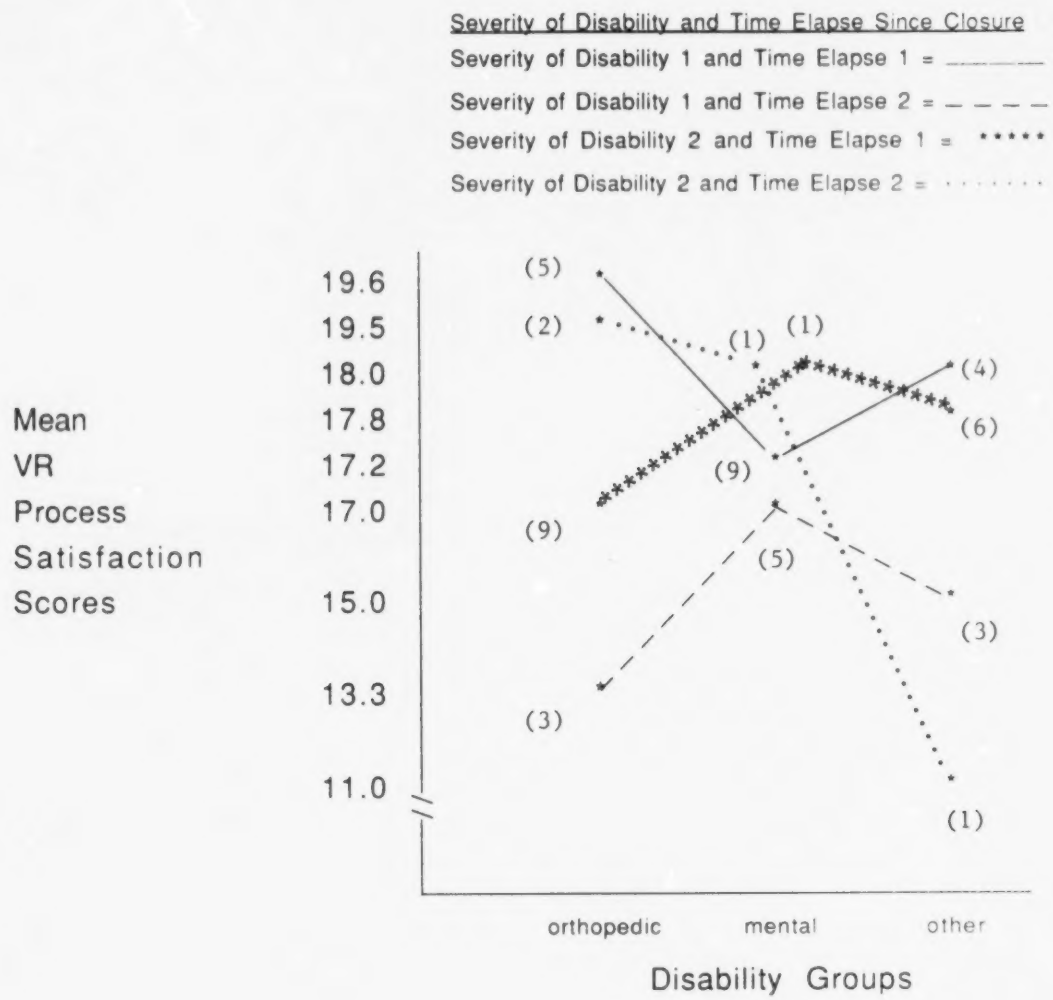
1. severity of disability, disability group, and time elapse since closure for the dependent variable VR Process Satisfaction,

2. severity of disability and disability group for the dependent variable VR Product Satisfaction,

3. severity of disability and time elapse since closure for the dependent variable VR Product Satisfaction.

The interaction among severity of disability, disability group and time elapse since closure for the dependent variable VR Process Satisfaction was depicted in a profile plot. The following were cited in Figure 1: mean VR Process Satisfaction scores and curves for severity of disability and time elapse since closure.

Figure 1: Interaction Among Severity of Disability, Disability Group and Time Elapse Since Closure for the Dependent Variable VR Process Satisfaction.



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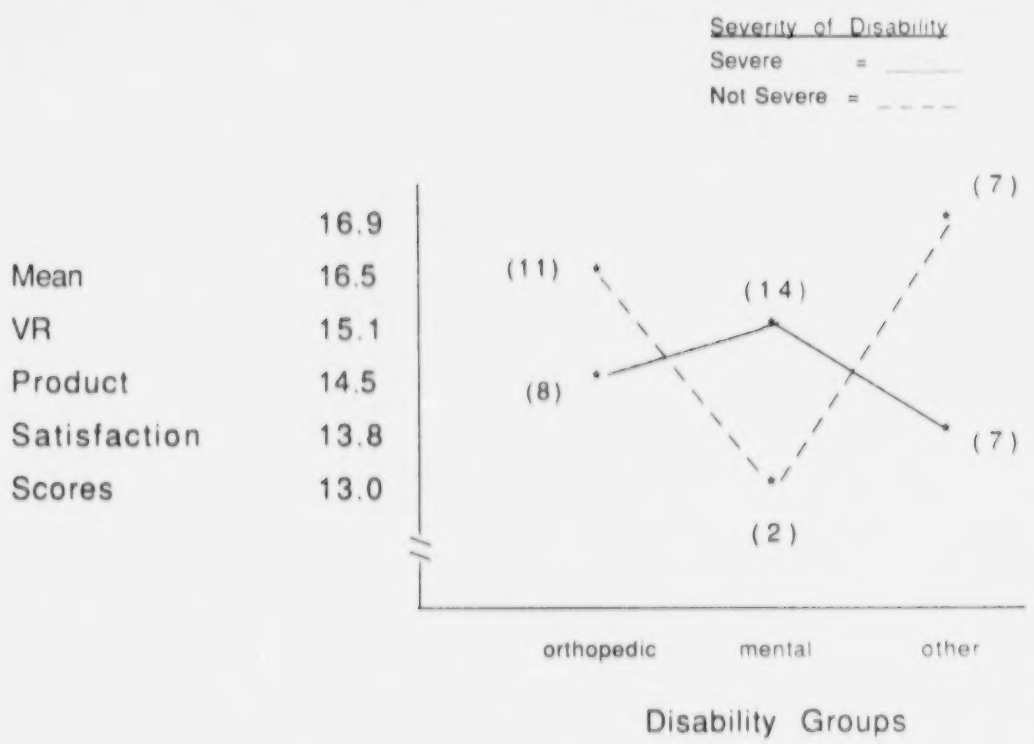
The interaction among severity of disability, disability group and time elapse since closure was disordinal. The information cited in Figure 1 indicated the following:

1. Clients with severe disabilities closed in fiscal years 1993 and 1994 with orthopedic disabilities had numerically the highest mean VR Process Satisfaction score of any subgroup, and

2. Clients not severe closed in fiscal years 1991 and 1992 with other disabilities had numerically the lowest mean VR Process Satisfaction score.

The interaction between severity of disability and disability group for the dependent variable VR Product Satisfaction was depicted in a profile plot. Figure 2 contains mean VR Product Satisfaction scores and curves for severity of disability.

Figure 2: The Interaction Between Severity of Disability and Disability Group for the Dependent Variable VR Product Satisfaction.



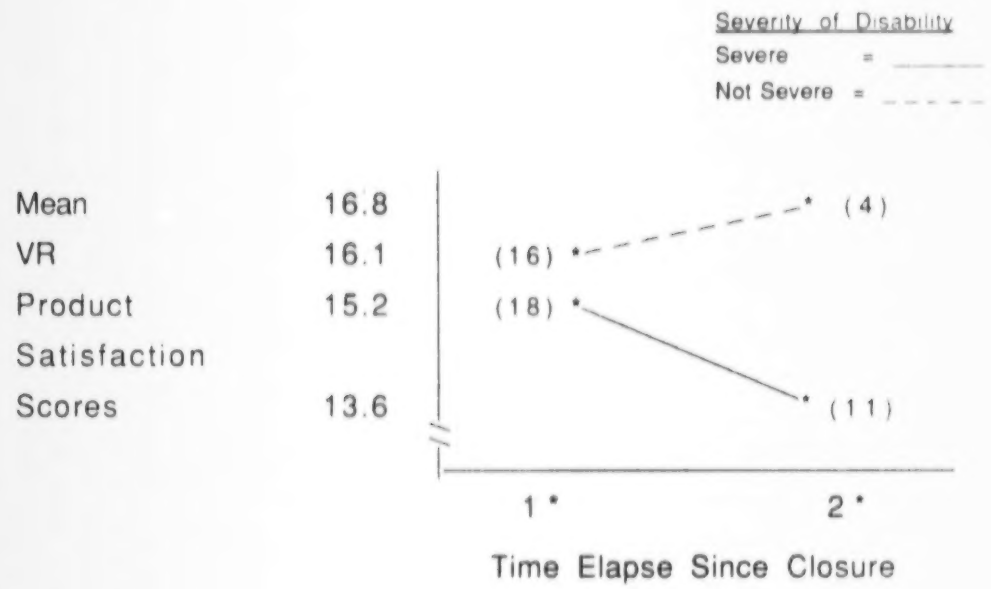
The interaction between severity of disability and disability groups for the dependent variable VR Product Satisfaction was disordinal. The information cited in Figure 2 indicated the following:

1. Clients not severe with other disabilities had numerically the highest mean VR Product Satisfaction score of any subgroup, and

2. Clients not severe with mental disabilities had numerically the lowest mean VR Product Satisfaction score of any subgroup.

The interaction between severity of disability and time elapse since closure for the dependent variable VR Product Satisfaction was depicted in a profile plot. Figure 3 contains mean VR Product Satisfaction scores and curves for severity of disability.

Figure 3: The Interaction Between Severity of Disability and Time Elapse Since Closure for the Dependent Variable VR Product Satisfaction.



* 1 = closed in fiscal years 1993 and 1994, 2 = closed in fiscal years 1991 and 1992.

The Interaction Between Severity of Disability and time elapse since closure for the Dependent Variable VR Product Satisfaction was ordinal. The data cited in Figure 3 indicated the following:

1. clients not severe had numerically higher VR Product Satisfaction scores than severe clients regardless of year of closure.

2. clients not severe whose cases were closed in fiscal years 1991 and 1992 had the highest mean VR Product Satisfaction score of any subgroup, and

3. clients with severe disabilities closed in fiscal years 1991 and 1992 had numerically the lowest mean VR Product Satisfaction score of any subgroup.

Composite null hypotheses numbers two, three, and four were not tested. These hypotheses could not be tested due to the validity of the responses and the distribution of the clients for the independent variable client need of further services. The lack of validity of the responses appeared to be due to the wording of the question. The question was asked of both unemployed and employed clients when it should have been administered only to clients unemployed or in sheltered employment.

It was hypothesized in composite null hypothesis number five that the difference between mean VR Consumer Satisfaction scores for employed clients according to work fulfillment would not be statistically significant. Information pertaining to null hypothesis number five was presented in Table 2. The following information was cited in Table 2: variables, group sizes, means, standard deviations, F values, and p levels.

Table 2: A Comparison of Mean VR Consumer Satisfaction Inventory Scores for Employed VR Clients According to Work Fulfillment, Employing a Three-Way Analysis of Variance

Variable	n	M*	s	F value	p level
VR Process Satisfaction					
Work Fulfillment					
1.**	21	17.0	1.94	0.72	.4000
2.	23	17.7	2.96		
VR Product Satisfaction					
Work Fulfillment					
1.	21	14.3[a]	1.59	14.27	.0005
2.	23	16.6[b]	2.31		

* The larger the value the greater the satisfaction.

** 1 = a score at or above the median on the VR Work Fulfillment Inventory, and 2 = scores below the median.

ab Difference statistically significant at the .05 level according to the Bonferonni (Dunn) t test for means.

One of the two p values was statistically significant at the .05 level; therefore, the null hypothesis for this comparison was rejected. The statistically significant comparison was for the main effect work fulfillment and VR Product Satisfaction. The results cited in Table 2 indicated that clients who reported VR Work Fulfillment Inventory scores at or above the median had significantly greater VR Product Satisfaction than those who reported VR Work Fulfillment Inventory scores below the median.

Discussion

Summary

The purpose of the researcher was to investigate consumer satisfaction and employment status for successfully rehabilitated VR clients from a central Kansas general caseload, and to identify clients in need of further services. The independent variables investigated were: severity of disability, disability groups, time elapse since closure, and work fulfillment for clients who were employed. The dependent variables were scores from the VR Process and Product sub-scales in the VR Consumer Satisfaction Inventory. The sample consisted of 49 VR clients. Two composite null hypotheses were tested employing a three-way analysis of variance (general linear model) and a one-way analysis of variance.

A total of 16 comparisons were made. Eight of the 16 were main effects and eight were interactions. Two of the main effects were statistically significant at the .05 level. The following main effects were statistically significant:

1. time elapse since closure for the dependent variable VR Process Satisfaction, and

2. work fulfillment for the dependent variable VR Product Satisfaction. The results indicated the following for main effects:

1. clients who had their cases closed in the fiscal years 1993 and 1994 rated VR Process Satisfaction statistically higher than those whose cases were closed in the fiscal years 1991 and 1992, and

2. Employed clients who scored at the median or above on the Work Fulfillment Inventory had a mean VR Product Satisfaction score statistically higher than those who scored below the median.

Three of the eight interactions were statistically significant at the .05 level. The following interactions were statistically significant:

1. severity of disability, disability group, and time elapse since closure for the dependent variable VR Process Satisfaction,

2. severity of disability and disability group for the dependent variable VR Product Satisfaction, and

3. severity of disability and time elapse since closure for the dependent variable VR Product Satisfaction.

Related Literature and the Results of the Present Study

Farley, Bolton, and Parkerson (1992) identified effective client involvement strategies for individuals receiving vocational evaluations. However, no difference was found between experimental and control groups on the postest Program Satisfaction

Survey. While client-centered program improvements may not be detectable in satisfaction scores prior to employment, the results of the present study indicated that work fulfillment is related to VR Product Satisfaction at follow-up.

Generalizations

The results of the present study appeared to support the following generalizations:

1. clients with high work fulfillment have greater VR Product Satisfaction than clients with low work fulfillment, and

2. significant interactions for,

   a. severity of disability, disability group, and time elapse since closure for the dependent variable VR Process Satisfaction,

   b. severity of disability and disability group for the dependent variable VR Product Satisfaction, and

   c. severity of disability and time elapse since closure for the dependent variable VR Product Satisfaction.

Recommendations

The results of the present study appeared to support the following recommendations:

1. the study should be replicated with a large random sample,

2. the study should be replicated with clients from various geographical locations,

3. the study should be replicated employing different instruments,

4. former VR clients should be located several years after case closure to assess their circumstances , and

5. further services should be offered for clients who have experienced adjustment difficulties.

References

Bolton, B. (1981). Follow-up studies in vocational rehabilitation. In E. L. Pan, T. Backer, & C. Vash (Eds.), Annual Review of Rehabilitation: Vol. 2 (pp. 58-59, 66). New York: Springer.

Czerlinsky, T., & Chandler, S. K. (1993, Spring). Effective consumer-service provider interactions in vocational rehabilitation. Office of Special Education and Rehabilitative Services: News In Print (Vol. 5, No. 4, pp. 39-43). Washington DC: Department of Education.

Dole, R. (1993). Dole calls for national commission to fix nation's vocational rehabilitation program. News Release from the Senate Republican Leader (Sept. 13, pp. 1-2). Washington, D.C.

Ellerd, D. A., & Moore, S. C. (1992). Follow-up at twelve and thirty months of persons with traumatic brain injury engaged in supported employment placements. Journal of Applied Rehabilitation Counseling, 23 (3), 48-50.

Farley, R. C., Bolton, B., & Parkerson, S. (1992). Effects of client involvement in assessment on vocational development. Rehabilitation Counseling Bulletin, 35(3), 146-153.

Harrison, D. K., & Others (1981). Client assessment measures in rehabilitation. Michigan Studies in Rehabilitation Utilization Series: 5. Ann Arbor: Michigan University, Rehabilitation Research Institute.

Hearing on the Reauthorization of the Rehabilitation Act of 1973. Hearing before the subcommittee on select education of the

committee on education and labor. House of Representatives, One Hundred Second Congress, First Session, (Sept. 26, 1991). Prepared Statement of Michael Paluso, Coordinator, Client Assistance Program, Albany, New York (Serial N0. 102-74, pp. 44-51). Washington DC: U.S. Government Printing Office.

Jagger, L., Neukrug, E., & McAuliffe, G. (1992). Congruence between personality traits and chosen occupation as a predictor of job satisfaction for people with disabilities. Rehabilitation Counseling Bulletin, 36(1), 53-60.

Levitan, S. A., & Gallo, F. (1991). Got to learn to earn: Preparing Americans for work. Washington DC: George Washington University, Center for Social Policy Studies.

McMillan, J. H., & Schumacher, S. (1989). Research in education. 2nd ed. Glenview, IL: Scott, Foresman.

Office of the Federal Register. (1993). Code of federal regulations (Vol. 34, Part 361.17, p. 338). Washington, DC: U. S. Government Printing Office.

Olney, M. F., & Salomone, P. R. (1992). Empowerment and choice in supported employment: Helping people to help themselves. Journal of Applied Rehabilitation Counseling, 23, (3), 41-44.

Rehabilitation Act Amendments of 1992. Public Law 102-569, SEC.128 (H.R. 5482, 106 STAT. 4386). Washington DC: U.S. Government Printing Office.

Roessler, R. and Bolton, B. (1985). Employment patterns of former rehabilitation clients and implications for rehabilitation

practice. Rehabilitation Counseling Bulletin, 28, (3), 179-187.

Sitlington, P. L., Frank, A. R., & Carson, R. (1992). Adult adjustment among high school graduates with mild disabilities. Exceptional Children, 59(3), 221-233.

Staff. (1982, March 30). 1981 consumer survey. Unpublished manuscript, Kansas Rehabilitation Services, Department of Social and Rehabilitation Services, State of Kansas, Topeka.

Staff. (1992, April 27). Population change summary. Unpublished manuscript, Kansas Rehabilitation Services, Department of Social and Rehabilitation Services, State of Kansas, Topeka.

United States General Accounting Office. (1993). Vocational rehabilitation: evidence for federal program's effectiveness is mixed (GAO/PEMD-93-19, pp. 1-104). Gaithersburg, MD: Author.

Weller, B. (1991). Client satisfaction with developmental disabilities services. Population and Environment: A Journal of Interdisciplinary Studies, 13(2), 121-139.

APPENDIX A

Permission to Research

STATE OF KANSAS

JOAN FINNEY, *Governor*

DEPARTMENT OF SOCIAL AND REHABILITATION SERVICES

Hays Area Office, 3000 Broadway, P.O. Box 549, Hays, Kansas 67601-0549

☎ (913) 628-1066

DONNA WHITEMAN
Secretary

GENE DAWSON
Area Director

September 8, 1993

Rehabilitation Services
3004 Broadway
Hays, KS 67601

Doug Main, Rehabilitation Counselor
Kansas Rehabilitation Services
2110 Kansas
P.O. Box 1245
Great Bend, Kansas 67530

RE: Master's Degree Research Project

Dear Doug,

I have received your request for permission to be able to do your Master's degree project on consumer satisfaction. In that this is an area that our agency is presently placing emphasis, it appears this would be a research area that would also benefit the agency. With this in mind, I do approve of your conducting research in this area. The following areas are to be considered in your research:

1) No identifying information on specific clients is to be included in the research, preserving confidentiality. (Glen Yancey's recommendation)

2) Client participation must be voluntary and not seen as a requirement of the VR process. (Glen Yancey's recommendation)

3) Results of the research will be made available to the KRS District Manager and any Central Office staff that requests results.

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I have visited with Marjorie Mallisee regarding this matter and she has granted her approval. A research design recommendation that she suggested is that the consumer satisfaction survey possibly be sent to clients by someone other than you. The rationale is that the clients might feel more free to respond in a candid manner if they felt their responses would not directly be seen by the person that controls their "case purse strings". Some offices have incorporated the supervisor in sending the consumer satisfaction surveys to clients and anonymity assurance is given to the client. Marjorie also indicated she was going to try and send out a copy of a consumer satisfaction survey that was utilized several years ago for a possible reference to you.

If you have any questions, please feel free to contact me at (913) 625-3489.

Sincerely,

Donald D. Moore

Donald D. Moore
District Manager
Kansas Rehabilitation Services
3004 Broadway
Hays, Kansas 67601

DDM:jfh

APPENDIX B

Demographic Questionnaire

Demographic Questionnaire

Name _____ Date _____

Address _____ Phone _____

_____ Age _____

_____ M / F

What changes in health/disability have you experienced since your case was closed?

_____

Are you employed? Y / N What jobs have you held since your case was closed?

1. _____ dates _____

reason you left the job _____

2. _____ dates _____

reason you left the job _____

3. _____ dates _____

reason you left the job _____

Advancements _____ Current wage _____

Benefits: GHI Y / N other benefits _____

What public assistance are you receiving? _____

Medical Card Y / N _____

What Social Security benefits are you receiving? _____

Changes in marital/family status _____

Current living arrangements _____

What further services do you feel you need? _____

_____

APPENDIX C

VR Consumer Satisfaction Inventory

Vocational Rehabilitation
Consumer Satisfaction Inventory

Please indicate your satisfaction with each item in one of the following ways:

	very unsatisfied	unsatisfied	satisfied	very satisfied
The VR program	____	____	____	____
Your VR Counselor	____	____	____	____
The VR services you received	____	____	____	____
Your involvement in the decisions made	____	____	____	____
The extent to which your needs were met	____	____	____	____
Your ability to find work if you needed to	____	____	____	____
Your marketable job skills	____	____	____	____
Knowledge of yourself and your career options	____	____	____	____
Your ability to live independently	____	____	____	____
The basic quality of your life	____	____	____	____

APPENDIX D

VR Work Fulfillment Inventory

Vocational Rehabilitation
Work Fulfillment Inventory

Please indicate your satisfaction on each of the items below in one of the following ways

	very unsatisfied	unsatisfied	satisfied	very satisfied
Your work	____	____	____	____
Your salary	____	____	____	____
Your benefit package	____	____	____	____
Your ability to do the work well	____	____	____	____
Your enjoyment of the work	____	____	____	____
Your potential for advancement	____	____	____	____
Your long term job stability	____	____	____	____
The fit between you and your job	____	____	____	____
The supervision you receive	____	____	____	____
Your relationships with coworkers	____	____	____	____

APPENDIX E

Additional Demographic Information

Additional Demographic Information

The following information was generated from the demographic questionnaire. There were 49 in the present sample. Thirty-nine were competitively employed. The mean age was 39. Six clients reported a deterioration in health or disability status and 2 reported an improvement. Eleven clients had changed jobs at least once since closure, and four had received advancements. Wages at closure ranged from $4.25 per hour in part time work to $42,000 annually. Sixteen Clients had no health coverage, 16 retained a medical card, and 17 received health insurance through their work. Ten individuals were receiving food stamps, but no other public assistance was reported. Seventeen received social security benefits. Family status included 22 clients who were either single, divorced or widowed and 27 who were married. Ten changes in living arrangements were reported including 5 marriages, 2 divorces, and 3 roommate transitions. Four lived with a roommate or live-in, 6 with parents, 12 lived alone, and 27 in a family context.

Mean wage increases for employed clients were as follows:

1. 20% for clients closed from two to four years (n=10) increasing from $5.85 at closure to $7.03 at follow-up,

2. 17.2% for the total group (n=39) increasing from $6.16 at closure to $7.21 at follow-up,

3. 16.9% for clients closed 3 months to 2 years (n=29) increasing from $6.27 at closure to $7.27 at follow-up, and

4. 12% for clients who received supported employment (n=8) increasing from $4.82 at closure to $5.42 at follow-up.

Bolton (1981) found that in VR follow-up studies up to 1980 approximately 75% of general caseload rehabilitants and 50% of comprehensive center rehabilitants were employed at follow-up, with generally no difference in employment between recently closed cases and cases closed two to four years. The GAO (1993) found that gains in employment shrank steadily from two to eight years post closure, to as low as 61% in 1988 - the last year examined . Ellerd and Moore (1992) found that employment for people with Traumatic Brain Injury who had received supported employment fell from 17 (71%) at 12 months, to 9 (38%) at 30 months. Employment rates from the present study (excluding 3 homemaker and 3 sheltered employment closures unless noted) included the following:

1. 94% for clients closed three months to two years,
2. 91% for the total sample,
3. 87% for clients closed two to four years and not receiving supported employment (n=8),
4. 83% for cases closed two to four years,
5. 71% for all supported employment cases,
6. 66% for cases closed two to four years with homemaker and sheltered employment closures included (n=15), and
7. 60% for clients who received supported employment and were closed two to four years (n=5).

Bolton's recommendation (1981) that ex-clients be located and

offered additional services if necessary was an initial focus of the present research. Fifteen clients expressed an interest in further services. Several clients who desired further services were employed and did not meet eligibility criterion or income guidelines for the services they needed. One employed client did elect to reapply in order to move from disability benefits and part time work toward a full time career pursuit. Of the 10 clients unemployed or in sheltered work, six have reapplied for services and now have an open VR case. One chose to remain in the sheltered workshop, two do not want to work at this time, and one is considering the decision to reapply.